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ON THE CONTAGIOUSNESS OF ASIATIC CHOLERA.

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THE following papers were written soon after the cholera was in this country in 1832. For the facts stated, it was considered there was ample authority at the time. Many of them were matters of personal observation; others were derived from the testimony of individuals; for it was the writer's fortune to travel with the disease, as it advanced from the Hudson River up the western canal and upon the borders of Lake Erie, into the State of Ohio—and also in a few weeks to return by the same route, after it had spread into the surrounding villages, and was at its height in some of the larger cities and towns. In all of the smaller villages where it had broken out, as well as in some of the larger, it could be traced to some individual, who had been exposed to it in some place where it had previously existed, or who had fled from an infected place, and from such individual it had spread as from a centre; so that so far as the writer's observations went, and they were extensive, there was no case known, where it appeared in any village as a common epidemic, but rather was brought as a contagious disease. Where towns were too large for any one to know and note the movements of all the inhabitants, it broke out in some instance perhaps without any one being able to trace it or to know where the party had been exposed. But this was the exception—the rule invariably was importation.

Great confusion has arisen here and elsewhere, in consequence of physicians not discriminating between this disease and the ordinary diarrhœa and cholera morbus of this country; hence before, and while it was here, in 1832, parties who had not seen it, and some who had, believed it to be nothing but an aggravated form of our own disease. Hence some physicians reported seeing it months before its appearance at Quebec and Montreal; and from the same cause, also, there are those who say they have seen it the past summer. While it was here in 1832, we had with it our own disease, cholera morbus and diarrhœa, constantly occurring as if the malignant disease were not here; and it having been assumed that the disease was not contagious, but epidemic, and that like all other epidemics it influenced all of the other prevailing diseases—in this country the attacks of the milder disease of our own climate were included with those of Asiatic cholera; the former, of course, were readily cured, and in this way the list of recoveries was largely swelled. The Asiatic cholera has peculiar characteristics—a history and symptoms which separate it from all other diseases, and which are obvious enough to the careful observer; yet they may be over-looked and mistaken, and are extremely liable to be, by him, especially, who believes it epidemic, and that it assumes the mild form of our native disease. Diarrhœa is often said to be a precursor, and it may be so; but it is not necessarily the disease—and yet the same state of bowels which would be liable to diarrhœa, would also invite an attack of the malignant cholera.

Blueness is one symptom attendant on the Asiatic cholera which has been often spoken of as characteristic or pathognomonic, as if it could exist in no other disease. This is an erroneous estimate of this symptom—for while it is nearly a constant attendant on the Asiatic cholera, it is not altogether absent from our own cholera, or from other diseases. True, it is a symptom rarely appearing, and of grave import when it does appear—because it denotes a very congested state of the capillaries, a very imperfect circulation, and a highly carbonized state of the blood, with great coldness and prostration. The writer has many times seen it, and with great intenseness, even when the party was suffering, not from cholera, but from a stoppage of the bowels. The cramps of the limbs have been improperly estimated, also; as from all time they have existed, more or less, with the common cholera of the country, and also with many other diseases, and have even been induced by the action of very powerful cathartic drugs.

That there is a strong resemblance between the malignant cholera and our own disease, is proved by the fact that each has been mistaken for the other. As it will be seen, the first case of Asiatic cholera which occurred in Canada, was mistaken for the disease of the country. It is not the intent of the writer to enter into the distinctive characters of the two diseases; it will be enough to say that the Asiatic cholera does not depend for its intenseness upon the commotion excited in the system by the offending matters in the prima viæ, so that the one bears a direct proportion to the other, as they do in the disease of this country. But, on the contrary, in the malignant disease, the puking and purging are only symptoms, and not essential—the intensity of the disease bearing necessarily no proportion to the intensity of these symptoms, unless, perhaps, an inverse one. The Asiatic cholera seems a subtle poison—invading the organic life, and destroying it, so that decomposition often seems to begin before animal and intellectual life leaves the body. It is shocking to see those, in whom all that constitutes organic life has ceased except the breathing—go on conversing in the full possession of their senses.

It depends on the poisonous nature of cholera that treatment is of so little avail. The writer has seen the emesis and catharsis cease—and that, too, where neither had been violent—for full twelve hours before death, and this without great prostration at first. Yet the patient would steadily sink until death—without the disease for a moment appearing to be arrested by any of the appliances which could be used, whether external or internal, any more than the like symptoms can be arrested in a case of full poisoning by arsenic. Indeed the manner of death by cholera resembles nothing so much as that of poisoning by arsenic.

A word on what is meant by contagion. It is not meant that it is a disease that will attack every one that is exposed to it, any more than the smallpox or measles, or any other of the contagious diseases. In all contagious diseases two things are essential—predisposition and exposure. Precisely what constitutes predisposition may not be known; but it probably is unlike in all, and peculiar in each of the contagions. The having had one contagious disease does not prevent the invasion of another. Cholera requires, also, a peculiar predisposition, and so far as appears, pre-eminently such an one as has been induced by intemperate and exhausting habits. Hence drunkards, and those of broken constitutions from any cause, are most liable to it.

The number of those predisposed to cholera hitherto, as appears from its history, is much smaller than of any of the common contagious diseases; and from this comes the doubt whether it is contagious at all. Because A and B were exposed and did not take it, therefore C or D could not. If this is correct reasoning, then no disease is contagious. There are many of the unvaccinated who do not take smallpox. Some will visit it with impunity for years, and take it at last, from an exposure no greater than that to which they had often before had. But no amount of negatives can ever disprove an affirmative. Because 10,000 had passed a bridge unharmed, it does not follow that the bridge did not fall with the 10,0001st. It is no matter, then, how many of the exposed have escaped; if only 1 in 1,000,000 has taken it from exposure to it, who would not have had it without, it is so far contagious. Now there is most ample testimony, as these papers state, that individuals, to escape contagion, had left infected places and gone into perfectly healthy villages, because they were so healthy, and been seized with the disease soon after their arrival—which would be followed by a seizure by the same disease of nearly all the nurses and more immediate attendants, who being scattered to their various homes in the town did spread it through whole sections of country. One such well-authenticated case proves its contagious nature. But in truth what more is needed to prove its contagious nature than the history of its arrival and progress in this country, and, indeed, in all the countries through which it has passed? Everywhere it has gone over the great lines of travel—the thoroughfares especially of the poor and ill-conditioned; and the wolves do not more certainly hang about and follow a herd of travelling buffaloes, to seize and devour the sick, the lame and disabled, than did this disease follow and accompany the long line of emigrants, who were threading this country to find a home in the far West.

It has been said that it attaches itself to an alluvial soil and fresh water. That salt water did not prevent it, has been abundantly proved by the numbers who have died on ship-board—by its crossing the Atlantic, and arriving on our shores; and the fears expressed that it may pass a second time are not groundless. As to its confining itself to an alluvial soil, it is so far true, that, inasmuch as the great lines of travel, both on this continent and on the eastern, pass through the valleys and along the rivers, over the secondary, and not over the primitive, which is for the most part everywhere rough and mountainous, so also goes the cholera over like places—for it follows its victims wherever they go, leaving to them the choice of the route; so that we shall have it if it is brought here, and not otherwise; and the predisposed will take it if exposed to it, otherwise they will escape; and those who have no predisposition, will not have it if exposed. In the mean time, if it should come, let every one stand in his lot; but the best advice to those who have no important duties to detain them, is to depart at once from all the infected districts. W. S.

Boston, Dec., 1848.

That the cholera which has appeared in Boston, and in other parts of our country, is essentially the same disease with that which broke out in India some 18 years ago, no one will deny who has accurately compared the phenomena of each. The manner in which the cholera has travelled over the eastern continent is familiar to all, and it will not, therefore, be recapitulated here. The purpose of this paper will only be to give some account of its introduction and progress through this country, and to make such remarks as the circumstances may warrant. And here it should be premised, that physicians, in all the places where it has appeared, differ so much as to what constitutes the disease, and of course upon the time of its introduction, that although it shall be the endeavor to weigh testimony with impartiality, nevertheless, no one should flatter himself that he will satisfy every cavil, or, indeed, that in all cases the facts on which he may rely will be beyond dispute, for there are no such facts. Unfortunately for dispassionate inquiry, the profession, previous to the appearance of the disease amongst us, had divided itself into two parties—one believing in the modified infection or contagion of the disease, the other denying it altogether. The latter party, desirous of appearing philosophical, have mistaken paradox for philosophy, and have left the beaten track of drawing obvious deductions from plain facts as old and out of fashion, and soared into the regions of fancy, and been pleased with any theory, however absurd, for accounting for the spread of the disease, except that which is obvious to the common sense of mankind. Hence some wiseacres have snuffed the cholera in the gentle breeze—or seen it months before it really appeared—"in a few cases," say they, but it died away—and all this has been believed. But more of this hereafter.

The cholera first appeared on this continent at Quebec, in June, 1832. Dr. Morrin, health commissioner, says a report was sent from Gross Island, stating their fears that the cholera had existed on board the Carricks, during her passage; that in consequence, he visited the vessel; found that she had left Dublin in April, and that 39 persons had died on board, the first four weeks of her passage, with a disease, if not cholera, much resembling it, and that the last death was on the 8th May, nearly a month before her arrival. "The vessel was quarantined, the passengers landed, washed and cleaned;" but whether the passengers were quarantined, is not stated, though it is probable that they were, but ineffectually. Dr. M. returned from the vessel on the 6th June. A doubtful case was reported by the Resident Physician at Gross Island on the 8th. The second case was on the 9th; taken ill on the wharf at Quebec while working; "same evening 4 others sickened and died." "It was ascertained," he continues, "that five out of the 7 first cases, were return passengers from on board the Voyageur steam boat, which boat had got passengers from on board two or three emigrant vessels in the river, and started from Quebec up river; bad weather coming on, the boat had to return on the 7th, and land 200 passengers, they finding lodgings principally in that part of Quebec where the disease broke out, and committed its greatest ravages." "I must say," says Dr. M., that "the first case was considered by Dr. Perrault (who is since dead by the cholera) as a severe case of the cholera of the country." The Voyageur proceeded to Montreal, not aware of leaving cholera in Quebec." Before her arrival at Montreal, one fatal case occurred on board, and a second was very ill; and the two first cases which appeared on shore in Montreal, were, I am credibly informed, from on board the boat. Indeed, the captain verily believes he received it from on board a vessel which, for reasons, I will not name. Dr. M. says, "All things considered, I am satisfied the cholera is contagious." Thus far Dr. Morrin.

This, then, is the history of the first appearance of the disease on this continent. Look a moment at the circumstances. It appears only after the arrival of a vessel coming from Ireland, where the cholera then was, which had lost 39 passengers by a disease which no one need doubt was the cholera. It not only came with the emigrants, but continued with them; wherever they went in numbers, there the cholera almost of course appeared.

And can any one suppose that a disease so peculiar in character, which had gradually travelled over the eastern continent, following only the line of direct intercourse, but everywhere retaining its distinctive character, could have a local origin in Quebec? And what are the peculiar circumstances of this city? It is situated in a high northern latitude, where the winter is long, and the spring so late that the first of June almost may be said to commence it, and where the atmosphere is cold, so as to be uncomfortable sometimes even in midsummer. Can any one suppose that on the 8th of June the sun was so powerful as to excite miasma sufficiently malignant to have generated so fatal a disease, even if the city was much more filthy than any one pretends that it is. Besides, the city was not *so filthy* as to lead one to suppose that, on that account, it would be the chosen seat of cholera. Quebec is mainly built on a hill, or bluff, having a street running at the base, along the river bank. But this street can scarcely be said to be low, because the tide runs so high here as to prevent any building on marshy land; and the city is constantly fanned by breezes, either from up or down the river. But suppose the city was so filthy, and its environs ever so well calculated to give rise to pestilential disease, how has it happened that these, being in existence more or less for a long time, should for the first time, in 1832, have generated the cholera? Was there anything in the circumstances of Canada, as to climate, or soil, or season, in 1832, which so much resembled Bengal in 1818, in these respects, as to lead one to suppose, on the strength of the old axiom "that like causes produce like effects," that therefore what the unusually irregular season of Bengal, almost within the tropics, had produced in 1818, should be re-produced in the wintry climate of Quebec, in 1832? One would have to unlearn all that reading or observation have taught, to believe that the deleterious influences of the tropics, be they from earth or air, would produce the same phenomena of disease as the deleterious influences from earth or air within the polar circle.

But some, giving up this position as untenable, have resorted to other modes of explanation. The winds, say they, had long been from the east, and probably they blew the fatal miasma across the Atlantic, and it happened to strike Quebec first. Let any one look on the map of this continent, and observe Quebec, distant from the sea several degrees of latitude inland, and believe, if he can, so strange a position. How many intermediate places must it have passed, and what circumgyrations it must make to hit on so small a point! Indeed, he who would seriously believe, not to say advocate, such a story, must have arrived at the *ultima thule* of credulity, and need not afterwards hesitate to swallow any absurdity, however gross. But this is not the first time the winds have been resorted to for carrying cholera. Men who think it requires too much credulity to believe that a disease may, under certain favoring circumstances, be communicated, and in their absence be harmless, have not hesitated to use the winds of heaven to carry it many a long league through the air, and this, too, when these same winds have blown directly contrary; the winds probably acting on the cholera miasm on the principles of solid elastic substances, their very resistance increasing the force in the opposite direction; so that the winds are used to carry the miasm forward with them, or if necessary, will answer as well to carry it in an opposite direction, though when they can have their choice they prefer that it should carry it forward.

The disease, as we have already seen, arrived at Montreal very soon after it appeared at Quebec in the manner above stated. I know some have denied that it was carried there, but have supposed it owing to a small stream which runs through the city. To this it should be replied, as it has been replied to the assertion of its local origin in Quebec, it was too early in the season for miasma of so malignant a nature to have been developed. Besides, it was not there until after the Voyageur arrived, and she had the disease on board. It is known that some physicians have asserted (and what folly will not some assert), that the disease "existed before, sprung up and died away, and nothing was said about it." This is to be placed on a par with statements made by physicians here, that they had seen the disease in Boston some six months before it really broke out. The same thing has been said in other places, and arises from considering the disease only an aggravated form of common cholera. One circumstance here requires a passing notice as not a little remarkable, although it is not peculiar to this case; which is, that the disease should have broken out so soon, and at so distant a point as Montreal—160 miles from its origin, in Quebec—whilst it left all the intermediate places unaffected. This should be enough to settle the question of its being communicable. Now both banks of the St. Lawrence, between the two cities Quebec and Montreal, are so thickly settled as to appear to one sailing on the river, like a continuous village; all the houses, according to Canadian custom, being built on the great road. Suppose, then, the disease to be carried through the atmosphere, and, also, to delight especially, as some have supposed, in fresh water river banks, how can it be accounted for that they had it in none of the intermediate places? It may be said to be owing to the want of any considerable town between the two cities; but Three Rivers, a very considerable village, lies between the two, which escaped. Perhaps it will be said to be owing to the peculiar neatness and temperance of the Canadians; but they do not seem to deserve any peculiar exemption on that account.

But, on the supposition that the disease is communicable, all the circumstances are readily explained. The intercourse, when the river is open, between Quebec and Montreal, is almost, if not entirely, by boats and other craft on the river: the steamboat, going up and down the river, scarcely stopping at any place but Three Rivers, which is about half way between the cities, for the purpose of taking in wood, and this but for a short time only. It may be asked why the Voyageur did not leave the disease here? To this there are two replies. One is, that it does not appear that she stopped here; and the other, that if she did, there is no probability that any of the emigrants would land there, as they start for Upper Canada and the United States, and Three Rivers has no direct road leading to the States; so, that, on arriving at Quebec, the emigrant at once shapes his course for Montreal, which is the general place of rendezvous and starting point for all, whether bound to Upper Canada or the United States. Immediately after it broke out at Montreal, it took the great route to the States, by La Prairie and St. Johns, breaking out in all the considerable villages to the head of Lake Champlain. This part of the way is usually performed on foot. Soon after, it broke out on the steamboats which navigate this lake, and was carried to several of the villages at which the boats stop, until it arrived at Whitehall, near which place several hundreds of emigrants were quarantined for a few days, but for less than a week, when they were permitted to go where they pleased. Many of them took the road to New York, on the east side of the river, avoiding Albany and the other considerable towns, because they had established a strict quarantine and enforced it by the military. In about a week after the emigrants were permitted to leave quarantine at Whitehall, the disease broke out in New York, and was conveyed back to Albany in about the same time; where, after a few days, it took the line of the Western canal, affecting at first one of its extreme points, Rochester or Buffalo, unless Buffalo received it from Canada; afterwards travelling backwards and affecting the intermediate places. All these different and distant places, which were attacked, are upon the direct route of emigrant travel, and are all stopping-places for that class of people; and, on the theory of the disease being contagious, the phenomena are easily accounted for.

It may be asked, how it happened that the disease should have broken out at places so distant from each other, leaving all the intermediate places for a time unaffected. To this it should be answered, that all the smaller villages established a quarantine, and would not permit any person sick with a suspicious disease to be landed or brought into their villages. This was the case in all the villages on the canal; every village had a health officer, and it was made the duty of the commanders of the boats to give account of all their passengers, and to report any who were sick, under a high penalty for neglect; and if any were sick, the boat was not permitted to land her passengers, but was compelled to go on. A boat left Albany, after the disease broke out there, in which, before it had proceeded a hundred miles, the disease appeared. This boat was forbidden to land her passengers or stop at any intermediate place until it arrived at Rochester, near 300 miles. There the people had learned that the disease was not contagious, and that restricted intercourse was uncalled-for and oppressive. They therefore surmounted the vulgar prejudice of taking precaution, and landed the people of the boat, after which the disease broke out and ravaged the town.

Soon after the cholera broke out on board the steamboats on Lake Champlain, they were forbid landing any of their passengers, and the boats of consequence ceased to run. A strict quarantine was also established upon the Canadian frontier; in consequence of which the tide of emigration took its course up the northern side of Lake Ontario, scattering the disease wherever it went, as at Kingston, York and Niagara; thence it proceeded up the north side of Lake Erie, some passengers crossing the Niagara. Meantime the boats on Lake Erie continued to run, carrying the emigrants as usual, but it soon broke out on board of them. The Henry Clay was the first boat on which it broke out. This boat left Buffalo with the United States' troops, destined to Detroit. At this time the disease was not known to be upon the American side, although it was upon the Canadian. She lost a number of her men, and wherever she landed passengers she left the disease, so that it spread throughout many parts of Michigan; indeed, wherever the troops went, the disease followed: even, as it was said, to St. Louis, Louisville, Cincinnati and New Orleans. The Henry Clay, after landing her troops, returned to Cleaveland, Ohio, where, after much opposition, the crew were landed on a low point of land and put into rigid quarantine. Several of the sailors had the disease here, but it spread no further afterwards. Some 12 or 15 days after, a woman was landed with the disease. By this time the inhabitants had begun to think quarantine useless; no precautions were used, and the disease spread through the town. In short, the cholera was known at only a few places on the southern side of Lake Erie, except where the boats landed emigrants, although there are many villages scattered along the shore of the lake, as much exposed to the effects of fresh water, and as large as those where it actually existed. An emigrant was landed at Erie, Penn., affected with the disease. She was insulated most rigorously, and the disease did not spread any further. A similar state of things existed in the State of New York; almost all the villages on the line of the canal were ultimately affected; while on the stage road, which runs parallel to the canal, but a few miles distant, the villages almost entirely escaped. Nor can this be satisfactorily explained by mere location, because the villages are similarly situated, as to fresh water, height of land and number of people. The only assignable cause was that the emigrants and poorer people, carrying the disease with them, travelled more by the canal than by stages, owing to the difference of expense in transportation.

The cases are not few, where people, who have fled from infected places, have been taken with the disease in villages whither they had gone, from whom it has spread as from a centre to the surrounding population. This took place in the town of Schoharie, as was learned on the spot. Dr. Morrin reports a similar case of Mr. Ray, who took the disease and carried it some 70 leagues to his family, of which several members sickened and died in less than three days. In addition to this, many similar instances might be quoted from Medical Journals and public papers.

But it is said that it has appeared in many places, to which it could not be traced by individuals or merchandize. This may be true; but it is apprehended that many cases which have been adduced, if sifted thoroughly, especially when sporadic, would be found to be only aggravated cases of common cholera, owing to causes above assigned: for little reliance could be placed on the reports of post-mortem examinations, even if they were uniform in appearances, and that even among those skilled in this business, as there is a strong predisposition for persons to see that which they had previously made up their minds to see. But what if we cannot trace every case to a contagious source? Is our inability to do this, evidence that there had been no such? One step more should be taken; and that would be to prove to a certainty that there had been no such exposure; because many cases can be traced to a previous exposure, and our ignorance is not to set aside positive facts. The friends may say that the suffering individual had been in no way exposed; but how could they know? Aye, how could the individual himself tell, even if he were in a situation to be questioned? How indeed could any one tell every place in which he had been, and all the circumstances of his going out and coming in, for the last fortnight? for there is good evidence to believe that it may be as long as ten days after exposure before the disease breaks out. Besides, the same thing happens in smallpox, a disease whose contagion is not doubted. This disease has broken out in this city, when it could not be traced to any previous case. This thing happened last winter in Dedham, where the disease broke out in the confluent form and killed the patient; but, up to this time, it has not been traced to its source. Is smallpox, then, not contagious? So we are bound to believe, if the argument to prove cholera not contagious is good for anything; and especially this should be our conclusion, since the laws of smallpox, from its having been so long observed, are well known; whereas the cholera is a new disease, and one whose laws are yet to be investigated. But it is said that many persons have been exposed to the disease who have not taken it. This is admitted; but is this peculiar to cholera? Does not the same thing happen in smallpox and other contagions? It is within the recollection of all of us, that smallpox broke out in Belknap street, where it remained long enough to have a second crop before it was known. Here there was unrestrained intercourse, but still very few took the disease. No one, it is believed, who knows all the circumstances, can believe that all the unprotected by vaccination had it. But if it were so here, in other places vaccination has been no protection, but the vaccinated and unvaccinated have alike been attacked by it. And what makes the difference? Evidently something which may be called predisposition; some invisible influence, undetected by mortal organs, but which, having been named, has been supposed to be understood.

All diseases acknowledged contagious are not at all times equally so. Who that has read Sydenham, can doubt that smallpox contagion is modified by epidemic influences, and that measles and scarlatina are equally so? No one who has been much conversant with medical practice can doubt. All this, however, has been overlooked by non-contagionists. They have therefore formed a test for cholera, which, applied to any other acknowledged contagious disease, would set aside its claims. Who does not know that the venereal disease, literally a contagious one, is not invariably so? There is good reason, from observation, to believe that of those exposed, and without any precaution, not more than one half take it. And it is somewhat remarkable, in the history of medical opinions, that when this disease was at first distinctly characterized, there were many who denied its contagious character most strenuously, and believed it to depend on miasmatic influences. True philosophy would teach us that no negative can set aside a positive fact in physics, and least of all so in medicine, where there may be and probably are innumerable unseen causes which may vary the result. Supposing one of us had related the unusual and anomalous manner in which some well-known medicine had affected a patient, and some one should deny the statement, alleging that he had used the medicine a thousand times (if you will), and that it had never produced the supposed effect, and therefore never could. Would not the unanimous opinion be, that such an one had better begin and study the rudiments of the profession? Such an argument would warrant us in sifting the alleged fact, but not in setting it aside.

But if this is the case, when treating of a remedy with which experience has made us acquainted, are we to apply this reasoning to a disease, whose laws are to be discovered, and set aside incontrovertible facts, which (for the present, at least) can be accounted for on no other hypothesis than contagion? No; let us put ourselves in the position of learners and candid observers. All who have watched the progress of the cholera over our world, must acknowledge that its spread has not corresponded with the known laws of mere epidemic influences. This was not the case in Boston. It is put to all, whether the disease which we had here last autumn, resembled in its progress an epidemic catarrh—whether its breaking out and subsiding, in different sections, and its lingering in our city—did not rather resemble measles or smallpox than any other known diseases? And what if we could not tell the precise person who brought the disease here; was it wonderful, on the supposition of contagion, that it came? Had we not sufficient intercourse with infected places to have it brought here? was it not rather wonderful that we escaped so long? And He alone who rules the destinies of cities, as well as individuals, can tell why we were spared so long and escaped so easily. Whether human wisdom and vigilance, on the part of governments, will ever be able so completely to cut off human intercourse as to prevent its introduction into every nation and kingdom under the whole heaven, until it shall have finished its appointed work of scourging the whole family of man, we have yet to learn.

The inefficiency of quarantine regulations in preventing the introduction of this disease hitherto, has been owing to the difficulty, if not impossibility, of preventing intercourse between the infected and the non-infected. This difficulty is found insurmountable, even under most severe military regulations, in Europe; for even in cases where the sentries were in sight of each other, and the penalty of instant death on detection was known to be threatened, intercourse was still kept up under cover of the night. This was the case in Prussia. In our own country, where, from the intelligence of the people, every man is a police officer, the same difficulty occurred. As an illustration, in the village of Geneva, N. Y., during the height of the alarm, and while the whole northern border of the State was put under the most rigid quarantine, there were from ten to a dozen individuals, who had arrived directly from Montreal, leaving there after the disease broke out, who had taken lodgings in one boarding-house. The information was received from a physician who had been called to visit the family, and who said that the master of the house stated the fact to him the very day, in July, 1832, on which he communicated it to me. With the knowledge of such a fact, one can appreciate the value of the assertion, that as all intercourse had been cut off between this country and the Island of Cuba, therefore the disease which broke out there must have had a local origin.

But, after all that has been said, many will doubt its contagious nature, and will attribute it to almost any other cause. Atmospheric influence has already been mentioned; and to what has been said, it may be added that it would be difficult for any one to point out any epidemic whose history is known, and which can be fairly attributed to atmospheric influence, whose manner of spreading corresponds at all with that of cholera.

As to *Telluric* influence, as it is not easy to understand what else than miasma is intended by the term, and as its authors have seemed to prefer to have it veiled in obscurity, it will not be attempted to develope it, passing it by as one of the resorts of that philosophy which prefers, rather than acknowledge ignorance, to retreat behind a hard name.

After all, whatever theory may be adopted, there is much obscurity, and many things which are difficult to be accounted for.

The action of the disease, so far as by reading and observation one can form an opinion, is upon what Hunter calls the *vita diffusa* of the body: by that term meaning that invisible agency which makes the living animal fibre differ from the dead; which brings particles of matter together, and holds them in harmonious union, contrary to their chemical affinities; which being withdrawn, the chemical laws re-establish their empire, and decomposition is the result. Upon this, then, the subtle poison acts, and hence the cessation of all those acts which depend upon it.

NITRATE OF POTASS IN RHEUMATISM.

AT a meeting of the Royal Medical and Chirurgical Society, London, Nov. 14, a paper was read by W. R. Basham, M.D., "On the employment of nitrate of potass in acute rheumatism; with suggestions for the use of saline solutions as external applications in local rheumatic inflammation." The author takes, as the basis of his essay, the following facts: 1st, that in acute rheumatism, as in other inflammatory diseases, the most important changes in the composition of the blood are the increased quantity of fibrine, and the deficiency of the saline ingredients; 2d, that where this state of the blood exists there is a special disposition to the deposit of fibrine, and the formation of adventitious tissues; while in diseases in which the fibrine is deficient, and the salts in excess in the blood, the blood does not coagulate, and hæmorrhages of a passive character occur; and 3d, that although, as his own experiments have satisfied him, saline solutions have not the power of dissolving coagulated fibrine, yet certain salts in solution, mixed with the blood at the moment of its escape from the body, possess the property of suspending or retarding the separation of the fibrine. He next inquires whether any therapeutic principle can be derived from these facts, and proposes the question, whether saline remedies, largely employed, may not suppress the tendency to the fibrinous exudation, or retard it, so as to give time for other remedies to diminish the proportion of fibrine present in the blood. With reference to this question, he alludes to the observations of several physicians on the use of nitrate of potash in acute rheumatism, and details his own experience of its effects. He gives one, two, or three ounces of nitrate of potass, largely diluted (in two quarts of water), in the twenty-four hours. In the majority of cases no obvious effect is produced on the force or frequency of the pulse, the digestive functions, or the quantity of urine exuded. But the urine always acquires a high specific gravity, and nitrate of potass may be detected in it. The swelling, heat and pain of the joints affected with rheumatism are relieved in a most marked degree, even when no other remedies are employed at the same time. There is a certain amount of exemption from cardiac complication; and cardiac inflammation, when present, is more amenable to remedies. In a case which the author relates, he examined the blood of the patient before the commencement of the saline treatment, and again after this treatment had been continued for some days. In the first instance it was buffed and cupped, the fibrine was in excess, and the salts were deficient. After the administration of the nitre there was no buffy coat, the proportion of fibrine had diminished, and that of the salts greatly increased. The author presumes, therefore, that while the internal use of the nitrate of potass assisted to restore the proportion of the saline constituents, the other treatment employed tended to lessen the excess of fibrine. Some remarks of Mr. Gulliver have led the author to investigate the effects of the external application of saline matters to parts affected with rheumatism. His experiments have been principally made with nitrate of potass. In chronic rheumatism he has used the iodide of potassium, and in gout the bibasic phosphate of soda. He applies the saline substance by means of the spongio-piline, a portion of which, large enough to envelop the part affected, having been moistened with water, the salt employed is sprinkled in powder freely on the spongy surface: it is then applied to the part, and secured with a roller. In numberless instances, by this simple treatment, he has witnessed the most palpable and instant relief to the local inflammation. Constitutional remedies were employed at the same time, but the relief was proved to be due to the saline applications, by the fact, that where several joints were affected, only those were relieved to which the salt was applied. At the end of the paper the author gives an abstract of seventy-nine cases of acute rheumatism, showing the results of treatment, and other particulars.

Dr. Henry Bennett had witnessed the results of a similar mode of treatment to that practised by Dr. Basham, in Paris, in 1837, and subsequently. In that year, M. Gendrin had instituted a series of experiments with the nitrate of potash, in acute rheumatism. He gave it in doses varying from six to twelve drachms. He had seen this treatment adopted in about as many cases as were recorded in the paper before them, and with the same result. It was found to be a safe, powerful, and energetic remedy. In the experiments of M. Gendrin, no other medicine was given, not even aperients. The result of the treatment was generally successful, but in every tenth or twelfth case it was found necessary to resort to the old remedies, bleeding, calomel, and opium, &c. It was noticed, also, that patients treated with the nitrate of potash were unusually free from cardiac disease, more so, indeed, than when any other kind of treatment was adopted. Another noticeable circumstance connected with this mode of treatment was, that patients recovered more rapidly from the disease than when any other plan was pursued. This was most important, particularly in Paris, where bleeding was often resorted to, to a considerable extent, and patients were consequently kept months, and even years, in a weakly condition. He had never seen any injurious effects from the large doses given. This, no doubt, was owing to the large quantity of fluid in which the medicine was dissolved. In all cases of poisoning by this agent, recorded in works on medical jurisprudence, the quantity of fluid used was small. The plan pursued was perfectly original, and the originality was due to Dr. Basham. In slight rheumatic cases, in which there was little febrile action, this treatment was most beneficial, the patients recovering in four or five days.

Dr. C. J. B. Williams inquired the number of days that it required to give relief to the acute symptoms in rheumatic fever.

Dr. Basham said, that in only two cases had he treated the disease by nitrate of potash alone. The acute, inflammatory symptoms usually gave way on the third or fourth day; and it was important to state, that in no one case treated by the nitrate of potash had there been any relapse. This was a strong recommendation of the value of the treatment, when we recollected how common relapses were, when the other modes of treatment were employed. In the first instance, he had given as much as four ounces of the salt in the twenty-four hours, but he had now reduced the quantity to one or two ounces in that period. A great quantity of the salt escaped by the urine, the quantity of which was not much increased, but its specific gravity was a great deal higher, averaging between 1030 and 1040. This increase in the specific gravity he considered was due to the potash.

THE INSTRUMENT FOR TRACHEOTOMY.

BY MARSHALL HALL, M.D., ETC.

Every recollection I have of tracheotomy convinces me that it is far more advisable to remove a circular portion of the trachea, and to secure the integuments and muscles from passing over the orifice made, than to use a tube.

In one case, after the use of the tube for a few days, with much inflammation and irritation, it was removed entirely, and the patient breathed freely several weeks through the orifice only.

In another case, the tube excited so much inflammation as, I believe, to prove fatal.

I would therefore propose the rejection of the silver tube. This may be still more necessary in tetanus or hydrophobia, should the operation ever be performed in these cases, than in any other, on account of the augmented irritability of the spinal system.

Reduced to this simplicity, therefore, all that is required is an instrument for removing a circular portion of the trachea. A steel tube with an extremely sharp edge at the lower part, to which a piston is accurately fitted, is all that is required. All hæmorrhage having ceased, this tube must be accurately applied to the trachea, and with a little force, and the piston is to be drawn smartly upwards. The portion of the trachea is drawn into the tube with a slight report.

It must be admitted, however, that such an instrument would require to be in excellent order, and to be used with a skilful hand. The profession are therefore indebted to Mr. Weiss, who kindly volunteered his aid in carrying out my suggestion, for proposing a material improvement in my instrument.

It may be known that a steel tube, with a lower cutting edge, through which a small screw, in the form of a cork-screw, is made to pass, is employed for removing a minute portion of the tympanum in certain cases of deafness. Mr. Weiss proposed to use a little cork-screw of this kind instead of the piston, in the instrument for tracheotomy, and such an instrument is now before me.

The portion of trachea is seized by the screw, and the steel tube descends with a rotatory motion, and removes the portion of trachea with the utmost facility and certainty.

A still more simple instrument could be constructed, by substituting a small *tenaculum* for the cork-screw. Indeed, with the aid of a small tenaculum, the skilful surgeon would readily remove a circular or oval portion of the trachea, by means of a couching-needle or a very small scalpel; or such an instrument might be made to revolve round a fixed point. Thus, then, the profession is provided with a ready mode of performing tracheotomy.

Besides the case of laryngitis, of tetanus, or of hydrophobia, the patient in the stertor of drunkenness, of epilepsy, or of apoplexy, when this is extreme, dies of asphyxia. Now that tracheotomy is rendered so safe and easy, I trust such an event will not again be permitted to occur.

There is another view of this remarkable question. I believe no violent *general* convulsion could occur, if the glottis were not closed; in other words, if the trachea were opened. Might not the faculties, or the life of the epileptic patient, be preserved by tracheotomy, the orifice being preserved open? The wound might be healed like that of the pierced ear, and opened or closed as the occasion required. I would propose this measure, as a preventive, in the case of frequent severe epileptic seizure. Over the orifice a proper guard might be worn, permitting the ingress and egress of the air, and admitting of being closed at will for articulation.

One gentleman has asserted that the hydrophobic patient does not die of asphyxia. I should think he never *saw*, or carefully observed and watched, a case of that most fearful of maladies, as he is obviously unacquainted with the writings of Dr. Physick, of Philadelphia.

I need not remind my readers of the importance of some proper instrument for the performance of tracheotomy in *infants* and children, in whom the free *space* over the trachea is so limited.—*London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, DECEMBER 27, 1848.

Dr. Jackson's Introductory Lecture.—When the present term opened for the annual lectures at the Medical College in Boston, it devolved upon the Professor of Pathological Anatomy, J. B. S. Jackson, M.D., to address the class. The occasion was calculated to excite both speaker and auditors, while they were comparatively strangers to each other, but brought together under circumstances that would lead to an acquaintance as enduring as their lives. Dr. Jackson is one of those retiring men, who never exhibit a shade of ambition to place themselves prominently before the public, in any attitude; but the profession long since discovered his rare qualifications, and the University has honored itself by securing his services in the School of Medicine. A favorite thought is carried through the discourse, on which students may dwell with enthusiasm and profit, which is, in effect, that whatever you do, have it thoroughly done. Begin with the elements, and never relax till every jot and tittle is perfectly and clearly understood. While investigating the phenomena of disease, there must be no slighting even the consideration of a shadow that can possibly be of service. Hurrying, too, is reprobated; whoever embarks in medicine, must be patient and persevering, or he will suffer perpetual disappointments, discover his own imperfections—and, worse still, so will the people, when it is too late to recover lost ground. In closing, Dr. Jackson urges the necessity of cultivating a spirit of harmony towards professional brethren, for which he has our thanks. Physicians are strangely prone to quarrel, as though the world were too small for their occupancy at the same moment. As the wheels of time roll round, however, the discovery is generally made by those pugnacious, domineering kind of persons, who, like western land squatters, are determined to have all that joins them, that mankind cannot be driven to *like* those who only like themselves.

Infant Therapeutics.—That indefatigable worker, who never allows a single talent entrusted to his care, to remain unemployed, John B. Beck, M.D., of the New York College of Physicians and Surgeons, has given the medical public a series of essays on a subject that cannot be too closely studied by professional gentlemen, viz.—*Infant Therapeutics.* Now this is certainly a modest, unpretending title, notwithstanding the fact that subjects of grave import are, in its pages, brought under the examination and critical eye of one of the most learned and celebrated medical writers in the country. It is far from stooping down from an eminence, when such a person endeavors to instruct us in regard to the proper manner of prescribing for children. They are nations in miniature—and whatever conduces to the stability of their physical and moral condition, is worthy of the profound consideration of the highest orders of intellect. Prof. Beck first discourses on the effects of opium on the young subject. The sum of the argument is this—that it should rarely be administered. Should it ever be, to very young infants? Let all new beginners in practice, read this part of the book with fixed attention. Next, an essay on the effects of emetics on the young subject. Dr. Beck is down upon emetic tartar for children. Half the mothers in New England, it is presumed, keep a phial of antimonial wine, with which they dose their little ones with as much unconcern as they prepare their toilet. This point requires looking after. How many infants have died in consequence of the irresponsible manner of giving emetic tartar, no record will ever show. Essay III. relates to the effects of mercury on the young subject. In this, too, Dr. Beck displays a familiar acquaintance with the whole domain of practice. Without detailing the views or reasonings of the author, it is enough to remark that he has been judiciously exploring a field that promises a rich harvest. He has given the lead in a class of researches that others will be moved to pursue, from a conviction that it is essential to inquire whether all the articles reputed to be remedies are really so ;—and further, have not the claims of infants been too much overlooked and neglected, in the effort to cope with the infirmities, accidents, liabilities and maladies of adults? Copies are to be had at Ticknor & Co.'s.

Reese's Medical Lexicon.—Two essential qualities are discoverable at sight, in this gem of a dictionary, viz.—brevity and truth. Among quite a pile of lexicons, all of which are excellent, no one of them can compare with this for compactness. In one single line, the whole explanation of a term is given, and hence it is to all intents and purposes a student's handbook. Messrs. S. S. & W. Wood, of New York, have published a new edition, enriched by the addition of several hundreds of words not found in any other dictionary—says the title page—and this, too, is a condensed edition. The faculty of condensing a thousand pages octavo, into two hundred, six inches by four, retaining all the while the gist and essence of the whole, is no every day circumstance. In this little handy affair, however, students and physicians are put in possession of an admirable book of reference, that is none the less useful for being in miniature. D. M. Reese, M.D., resident physician of Bellevue Hospital, New York, and extensively known as the editor of Cooper's Surgical Dictionary, is the author. To be had at Ticknor & Co.'s, Washington street, Boston.

Clinical Midwifery.—This is a duodecimo of 238 pages, neatly printed, which illustrates whatever is formidable in obstetricy by a recital of cases. The author is that man of authority in this department of practical medicine, Robert Lee, M.D., of the Bristol Lying-in Hospital, London. Messrs. Lea & Blanchard, of Philadelphia, have re-published it from the revised English edition. A thrilling interest is felt in reading the trying circumstances under which the writer was often placed, life and death being nearly equipoised ; but the value of a scientific acquaintance with the structure of the pelvic region, ingenuity in the application of means at the instant of danger, exhibit, in this admirable book of precedents, the genuine triumphs of skill, art and science combined. If the experience of others in circumstances the most trying, is of any importance to practitioners—and there can be no doubt that it is—it strikes us that this plain statement of facts in practice must be exceedingly important, and a special attention is therefore bespoken in behalf of Lee's Clinical Midwifery.

Life Insurance.—With such facilities as are furnished by Life Insurance Companies, for securing a competency for a family, under the multiplied contingencies and uncertainties of life, it is really astonishing that professional men do not oftener take out policies. A striking instance of the value of this kind of provision recently occurred in the case of Mr. Habberton, of Brooklyn, N. Y., who paid only nine dollars and ninety-seven cents, and died of pleurisy four months after, leaving one thousand dollars for his bereaved family, which was promptly paid by the American Mutual Company, at New Haven, Conn., of which Prof. Silliman is President. A gentleman agreed to call at the Boston office a few weeks ago, to take out a policy the next day, but neglected to do so. He has since died from home, of a sudden and fatal attack of sickness. An ample fund might, by a few minutes' attention before leaving home, have been secured to his afflicted family. We have repeatedly urged the consideration of this subject upon our medical brethren, and still feel that it is worth their immediate attention.

The above named Company, of which Oliver Brewster, Esq., No. 4 State street, Boston, is the Agent, at the close of November, one year, issued nearly one thousand policies, and lost but two persons in that time—one of $2,000, and another of $3,000. The rates are said to be twenty-five per cent lower than any other Company, and the payments to be made as the party please, either semi-annually or annually.

Cod Liver Oil.—H. B. Skinner, M.D., 60½ Cornhill, Boston, is a manufacturer of this now much-admired remedy. He is successful in overcoming the offensive fishy odor, which is one of the formidable obstacles with some to its internal administration. In transparency and freedom from impurities, specimens from this establishment are quite unobjectionable, and the demand for a pure article is constantly increasing. Those embarked in the enterprise of furnishing the medical market must reap a rich harvest.

Mr. Souther, in Leverett street, has also acquired reputation for the elegant manner of putting up the oil of his make. Till he gave us some statistics in regard to the extent of this comparatively new business in Boston, we had no conception of the active demand for cod liver oil. Mr. Souther, in the first place, has quite a squadron of fishermen under his patronage, who are deriving an unexpected revenue from a source never contemplated by them till this new enterprise was started. Mr. Souther manufactures hundreds upon hundreds of gallons, in a short space of time—and to keep his presses working, he is receiving daily the raw material, sometimes as many as ten barrels a day, of the livers of cod-fish, from which alone the true medicinal cod liver oil is procured. Boxes of beautifully labelled bottles are sent off in all directions; and, although considerable competition already begins to be exhibited, the supply from all reliable sources is represented to be inadequate to meet the influx of orders from abroad.

An oil is also obtained from the skate, ling, cusk, and some other fishes on this coast; but less confidence is reposed in either of these oils than in that from the cod. This oil consists chiefly of oleic and margaric acids, in union with glycerin, combined with a small proportion of resinous matter, phosphoric acid, iodine and bromine. Its medical properties are ascribed to the iodine, small as the quantity is in any given quantity.

In strumous diseases, much reliance is placed on its action. Its flattering influences are fully admitted by taking a few ounces habitually; and the complexion, too, is represented to become clear and much improved by persisting in its use. This fact may ultimately lead to its patronage among ladies, as a cosmetic.

Births, Marriages and Deaths in Hartford, Conn.—The returns of births, marriages and deaths, in the town of Hartford, for the year ending August 7th, 1848 (made by the School District Committees to the Town Clerk, in compliance with the law of last session), exhibit the following result:—Whole number of births, 298. Marriages, 110. Deaths, 213. Of these, died of consumption, 36—lung fever, 14—scarlet fever, 9—typhus fever, 9—old age, 9—dropsy on the brain, 9—dropsy, 7—croup, 8—diseases of the heart, 7—dysentery, 7—fits, 7—smallpox, 5—ship fever, 4—apoplexy, 3—hooping cough, 3—neuralgia, 3—erysipelas, 3—accident, 6—suicide, 1—other diseases, 40—causes not returned, 23. Under 1 year of age, 29—between 1 and 5 years, 30—5 to 10, 9—10 to 15, 5—15 to 20, 17—20 to 25, 14—25 to 30, 14—30 to 40, 21—40 to 50, 11—50 to 60, 15—60 to 70, 20—70 to 80, 18—80 to 90, 7—over 90, 1—age not returned, 1.—*Courant.*

Dr. B. Dowler and the Academy of Natural Sciences, Philadelphia.—We are gratified to learn that our *confrere* and fellow-citizen, Dr. Bennett Dowler, has received from this learned and scientific academy the honorable title of Corresponding Member. We believe he is the first physician of the South who has been thus honored; and his laborious researches into natural science and their kindred subjects, fully entitle him to this distinction. We congratulate Dr. D., and trust he may live to gain yet higher honors in the field of science.—*N. Orleans Med. and Surg. Journal.*

Re-vaccination of the Prussian Army.—The re-vaccination of the Prussian army was continued during 1847. In that year, 43,264 soldiers were vaccinated; 34,284 bore evident traces of previous vaccination. The operation succeeded in 25,544 cases, was irregular in 7425, and failed in 10,627. Practised afresh in those with whom it had failed, it proved effectual in 2718 cases, and unsuccessful in 8052.

Married,—In Boston, John Renton, M.D., to Miss A. Lewis.—Dr. John O. Stone, of New York, to Miss C. C. Jackson.—At Leicester, Mass., Dr. Charles W. Whitcomb to Miss M. M. Estabrooks.—Dr. Lemuel L. Dickinson, of East Haddam, Conn., to Miss H. Johnson.—Edward H. Parker, M.D., of Boston, to Miss S. O. Heydock.—In Sunderland, Mass., Dr. Jonathan Linnell to Miss F. Graves.—In Templeton, Ms., Albigence Pierce, M.D., of Strafford, Vt., to Mrs. Louisa Bryant, of Templeton.—In Wilmington, Dr. Jonathan Brown, of Tewksbury, to Miss Olive Thompson.

Died,—Dr. Edward Skillman, of Ouachita, Louisiana, killed in an affray, by Dr. Byrd, of Baton Rouge.—At Somerville, Mass., Solomon Keep, M.D., 36.

Report of Deaths in Boston—for the week ending Dec. 23d, 75.—Males, 44—females, 31.—Of consumption, 12—typhus fever, 3—scarlet fever, 13—lung fever, 3—disease of the heart, 3—croup, 5—pleurisy, 1—infantile, 2—inflammation of the lungs, 2—old age, 2—erysipelas, 2—intemperance, 1—child-bed, 3—smallpox, 1—paralysis, 1—canker, 1—dropsy, 1—dropsy on the brain, 3—hooping cough, 2—disease of the bowels, 1—accidental, 2—teething, 1—debility, 1—suicide, 2—marasmus, 3—influenza, 1—convulsions, 1—dysentery, 1—disease of the brain, 1.

Under 5 years, 33—between 5 and 20 years, 4—between 20 and 40 years, 22—between 40 and 60 years, 11—over 60 years, 5.

Medical Miscellany.—A fine class of Students is in attendance at the Buffalo Medical College. The new stone building, 100 by 90 feet, is under cover and will be completed for the next term. Drs. Bryant and Sweetser, of Geneva, are very popular, although new professors. Dr. Bryant's introductory on the life and character of Baron Larrey, is in press—a good thing, too.—It was unusually sickly at Port Praya, Africa, at the latest dates.—Dr. J. S. Jones, of Boston, has received the prize recently offered for the best local drama.—Scarlet fever is now quite rife in Boston.—In 1843, the total number of lunatics in England and Wales was computed at 20,000, and in 1847, at 23,000. The number at present is estimated at 30,000. Of these, about 5000 belong to the higher and middle classes, and 18,000 are paupers.—Sivori, the violinist, gave his last concert, a short time ago, at Valparaiso, for the benefit of the sick at the hospital there.—Small-pox has appeared at Clintonville, Mass, and also at Great Falls, N. H.—Dr. Boynton has lectured at the Tabernacle, in New York, on the gold fever, now spreading over the world like an epidemic.—Chloroform may be used with singular advantage in asthma.—Sir Michael Faraday, the London Chemist, is represented to have discovered a new mechanical power, connected with magnetism.—Medical adventurers of every grade of acquirements are gone and going to California.

SURGICAL INSTRUMENTS.

J. W. PHELPS would announce to the medical profession, that, during his late tour in Europe, he secured the agency for the sale of Weiss and Son's (London) celebrated Surgical Instruments, and since his return has received an invoice comprising Amputating, Trepanning and Obstetrical Instruments of new patterns. Segala's Speculum Vaginæ, Jordan's Ear Lamp, Reservoir Syringes with metallic pistons, Pocket Cases, &c. These Instruments are known to the profession as the best in use, and are supplied by this London house to nearly all the Hospitals and eminent surgeons of Europe. From the same house the subscriber will be supplied with all new inventions and improvements in the art, as they appear from time to time in Europe. The above articles, with many not enumerated, together with a full assortment of his own Patent Convex Spiral Trusses and Abdominal Supporters, may be found at 176 Tremont St., opposite Tremont House, Boston. Oc25—6m

FRESH AND GENUINE DRUGS AND MEDICINES

Of superior quality, carefully prepared for Physicians' use, and for sale on the most favorable terms at 33 Tremont Row, Boston, by JOSEPH BURNETT,
Feb. 10—tf. *(Successor to T. Metcalf.)*

JOSEPH BURNETT,
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OFFERS to Surgeons and Dentists, the best selected assortment of Instruments to be found in the city, consisting in part of Amputating, Trepanning, Obstetrical, Dissecting, Strabismus, Pocket, Eye, and Cooper's Cases; Scarificators, Catheters, Bougies, Stomach Pumps, Injecting do., Spring and Thumb Lancets, Dissecting and Dressing Scissors, Trocars, Needles, Bistouries; Dressing, Dissecting, Polypus and Throat Forceps, Tonsil Instruments, &c. &c., of American, English and French manufacture.

Extracting Forceps, of Chevalier's manufacture from Dr. Flagg's patterns, in sets of 12, or singly, of superior form and finish; Excavators, Burrs, Pluggers, Drills, Files; Cutting, Splitting and Punching Forceps; Gold and Platina Plate and Wire, common and fine Solder, Spiral Springs, Gold and Tin Foil, MINERAL TEETH, in great variety, (much the largest assortment to be found in New England), Grindstones, and almost every article used in the surgical or mechanical departments of Dentistry.

Instruments sharpened and repaired at short notice.

☞ All orders from the country shall receive careful and prompt attention.

Feb. 10.—tf

DR. JARVIS'S ADJUSTER.

THIS newly-invented instrument for reducing fractures and dislocations—Also, single and double pad Glass Trusses, Reinhardt's manufacture, and Dr. Cutter's Abdominal Supporters, for sale by N. HUNT, Surgical Instrument manufacturer 128 Washington street. Sept.30.—tf

SCHAUFFLER & LEUKHARDT—364 Washington Street,

MANUFACTURERS of Stethoscopes of every description, Inhaling Tubes of different patterns, Probangs, and other kinds of Instruments, and handles of wood and ivory, which belong to the Physician's and Dentists' profession. In regard to the finish, style and price, they hope to give full satisfaction to all who give them a call. All repairings done promptly and neatly. Sep. 27—13t.

INFIRMARY FOR THE CURE OF HERNIA AND ANALOGOUS DISEASES.

THE undersigned will continue to treat and effect a *speedy cure* of Hernia or Rupture, Varicocele, &c., by his *new method of operation*, under almost every variety of form in which they are presented to the care of the surgeon, without the use of *trusses or suspensories*. Irreducible hernia of long standing made reducible, and a cure accomplished in most cases. Patients from the country are informed that additional private accommodations have been recently secured for their convenience and comfort while under treatment.

Applications must be made at No. 9 Winter Street, or No 2 Exeter Place, Boston.

April 7—eoptf G. HEATON. M.D.

VACCINE VIRUS.

PHYSICIANS in any section of the United States, can procure ten quills charged with PURE VACCINE VIRUS by return of mail, on addressing the Editor of the Boston Medical and Surgical Journal, enclosing one dollar, *post paid*, without which no letter will be taken from the office. Feb. 8.